

PHILADELPHIA ELECTRIC COMPANY

LIMERICK GENERATING STATION
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M. J. MCCORMICK, JR., P.E.
PLANT MANAGER
LIMERICK GENERATING STATION

October 20, 1989.
Docket No. 50-353
License No. NPF-85

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

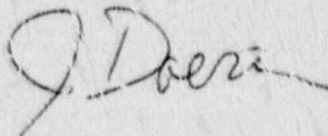
SUBJECT: Licensee Event Report
Limerick Generating Station - Unit 2

This LER reports a condition prohibited by Technical Specifications in that Unit 2 entered the Startup Operating Condition with the 'B' Residual Heat Removal subsystem not in the Low Pressure Coolant Injection mode due to personnel error.

Reference: Docket No. 50-353
Report Number: 2-89-007
Revision Number: 00
Event Date: September 20, 1989
Report Date: October 20, 1989
Facility: Limerick Generating Station
P.O. Box A, Sanatoga, PA 19464

This LER is being submitted pursuant to the requirements of 10 CFR 50.73(a)(2)(i)(B).

Very truly yours,



VAW:ch

cc: W. T. Russell, Administrator, Region I, USNRC
T. J. Kenny, USNRC Senior Resident Inspector, IGS

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Limerick Generating Station Unit 2 DOCKET NUMBER (2) 0 5 1 0 0 1 0 1 3 1 5 3 1 PAGE (3) 1 OF 0 1 4

TITLE (4) Entry into Startup Operating Condition with Residual Heat Removal System in Shutdown Cooling due to Personnel Error

EVENT DATE (5)			LER NUMBER (6)		REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)																							
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	DOCKET NUMBER(S)																						
0	9	2	0	8	9	8	9	0	0	0	7	0	0	1	0	2	0	8	9	0	5	0	0	1	0	1	3	1	5	3	1

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

OPERATING MODE (9)	4	20.402(b)	20.405(e)	50.73(a)(2)(iv)	72.71(b)
POWER LEVEL (10)	0, 0, 0	20.406(a)(1)(i)	50.36(a)(1)	50.73(a)(2)(v)	72.7 (e)
		20.406(a)(1)(ii)	50.36(a)(2)	50.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.406(a)(1)(iii)	X 50.73(a)(2)(i)	50.73(a)(2)(vii)(A)	
		20.406(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(vii)(B)	
		20.406(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(ix)	

LICENSEE CONTACT FOR THIS LER (12)

NAME C.R. Endriss, Regulatory Engineer, Limerick Generating Station TELEPHONE NUMBER 215 312 71-11 P. 1010

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) NO X

EXPECTED SUBMISSION DATE (15)

MONTH	DAY	YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On September 20, 1989, at 1517 hours during the start up of Limerick Generating Station Unit 2, the Unit was placed in the STARTUP OPERATING CONDITION with the 'B' Residual Heat Removal (RHR) subsystem in the Shutdown Cooling mode rather than the Low Pressure Coolant Injection (LPCI) mode required by Technical Specifications (TS). The 'B' RHR subsystem was subsequently aligned in the LPCI mode at 1823 hours. The consequences of this event were minimal because the other three RHR subsystems were operable in the LPCI mode. The cause of the event is procedure non-compliance due to personnel error. Also, contributing was a lack of clarity in the procedure governing plant startup. The personnel involved were counseled and the procedure was revised to improve its clarity. No similar problems were found in review of other operations procedures that have parallel action steps.

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
		89	007	00	

TEXT (if more space is required, use additional NRC Form 288A's) (17)

Unit Conditions Prior to the Event:

Unit 2 Operating Condition: 4 (Cold Shutdown)

Reactor Power: 0%

Description of the Event:

On September 20, 1989, Limerick Generating Station Unit 2 was in cold shutdown with the 'B' loop of the Residual Heat Removal (RHR) system (EIIS:BO) in operation providing shutdown cooling. Preparations were being made to re-start Unit 2 following a Startup Test Program planned scram on September 18, 1989.

At 1515 hours on September 20, 1989, the mode switch was transferred from Shutdown to Startup and Operational Condition (OPCON) 2, STARTUP, was entered. At 1517 hours, licensed operations personnel discovered that the 'B' RHR subsystem was operating in the shutdown cooling mode and was therefore not available for the Low Pressure Coolant Injection (LPCI) mode. Technical Specifications (TS) Limiting Condition for Operation (LCO) 3.5.1, "Emergency Core Cooling Systems," requires that all four subsystems of the RHR system be available for LPCI in STARTUP. If one of these subsystems is not available, the associated TS action requires restoration of the subsystem to an operable status within 30 days or to be in at least hot shutdown within the next 12 hours. TS 3.0.4 states that "Entry into an OPERATIONAL CONDITION or other specified condition shall not be made when the conditions for the Limiting Condition for Operation are not met, and the associated ACTION requires shutdown if they are not met within a specified time interval." When STARTUP was entered with one subsystem of LPCI not available, it resulted in a condition prohibited by TS LCO 3.0.4 and as such is reportable under the provisions of 10 CFR 50.73 (a)(2)(i)(B). Upon discovery, shutdown cooling was terminated and the 'B' RHR subsystem was re-aligned and was available for LPCI at 1823 hours, September 20, 1989.

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TEXT (if more space is required, use additional NRC Form 388A (1) (17))

Consequences of the Event:

The consequences of the event were minimal and there was no release of radioactive material as a result of this event.

The other three RHR subsystems were operable and aligned in the LPCI mode and were available to perform the system's design function if required. Additionally, no control rod withdrawal occurred during this time period and the reactor remained shutdown and depressurized, minimizing the potential need for operation of RHR in the LPCI mode or operation of other Low Pressure Emergency Core Cooling Systems.

If the subsystem had remained in the shutdown cooling mode, the configuration would have been noted during plant heatup because isolation of the shutdown cooling valves would have automatically occurred at 75 psig reactor pressure causing a pump trip and annunciation in the control room.

Cause of the Event:

The cause of the event is personnel error. The Shift Superintendent and Control Room Shift Supervisor, both licensed personnel, did not comply with the provisions of procedure GP-2, "Normal Plant Startup." GP-2 requires, by reference to a system operating procedure, that RHR be aligned in the LPCI mode prior to placing the mode switch in Startup and entering STARTUP. GP-2 also requires that all open items identified by the Plant Operations Review Committee for changing OPCON's be resolved satisfactorily or be waived by the Plant Manager or alternate. The transfer of RHR from Shutdown Cooling to the LPCI mode was one of these open items. The transfer of RHR to LPCI mode was not completed when the reactor entered STARTUP.

Contributing to this event is a lack of clarity as to which steps of GP-2 are required to be completed prior to entering STARTUP. The lack of clarity is due to the fact that the procedure is intended to be used as guidance and many of the steps in GP-2 may be performed in parallel.

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		8 9	0 0 7	0 0	0 4	OF 0 4

TEXT IF more space is required, use additional NRC Form 388A's (17)

Corrective Actions:

The 'B' RHR subsystem was removed from shutdown cooling at 1517 hours and aligned in the LPCI mode and operable at 1823 hours on September 20, 1989.

Actions Taken to Prevent Recurrence:

GP-2 was temporarily changed on September 20, 1989 to identify those steps required for entry into OPCON 1, POWER OPERATION to prevent a similar occurrence during the transition from STARTUP to POWER OPERATION. GP-2 was permanently revised on October 3, 1989 to identify those steps required to be completed prior to entry into each operating condition. No similar problems were found in review of other operation procedures that have parallel action steps.

The Shift Supervision involved were counseled on the need for complying with all procedural requirements particularly since they are in a leadership position.

Previous Similar Occurrences:

There have been no previous similar occurrences involving non-compliance with TS LCO 3.0.4.

LER's 1-84-044, 1-85-069, 1-85-091, and 1-86-038 reported personnel errors involving Shift Supervision. However, these events involved unrelated circumstances and the previously implemented corrective actions are considered adequate.